REMARKS

Reconsideration of the pending application is respectfully requested in view of the foregoing amendments and the following remarks.

Status of the Application

Claims 1-9 and 11-23 are currently pending in the application. New claims 22 and 23 are supported throughout the specification, e.g., page 7. No new matter has been introduced into the application by way of these amendments.

Summary of the Office Action

Claims 1-9 and 11-21 are rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,593,057 ("Kita") in view of U.S. Patent 6,821,704 ("Ide") or U.S. Patent 6,457,413 ("Loccufier").

Kita is said to disclose a heat-sensitive lithographic printing plate precursor comprising an ink-receptive layer, a water-receptive layer comprising colloidal particulate oxide or hydroxide of at least one element selected from a particular group, and a water-soluble overcoat layer. According to the Office Action, Kita teaches that the particles are preferably from 0.005 to 0.1 microns, or a string of up to 0.4 microns.

Loccufier and Ide are said to each disclose heat sensitive printing plate materials comprising aluminum oxide particles or oxide particles of other metals also disclosed by Kita having a size of up to 10 microns and 0.5 microns, respectively. Given the teachings in the references, the Office Action concludes that it would have been obvious to one of ordinary skill to prepare the material of Kita with the larger particles given the teachings of Ide and Loccufier, with a reasonable expectation of achieving improved compression capacity.

Discussion

Applicants submit that the asserted combination is improper because the references themselves fail to provide any motivation to modify Kita in the manner suggested in the Office Action.

Kita teaches the inclusion of inorganic or organic fine powders in the ink-receptive layer of a heat-sensitive lithographic printing plate precursor. By adding these fine powders into this layer, Kita teaches that the adhesive property of the layer to the "upper water-receptive layer" will be improved, as will the impression capacity of printing. *See Kita, col. 3, lines 23-36.* In terms of size, Kita states that colloidal silica and colloidal aluminum has a particle size ranging from 10 to 100 nm, while a plumous particle of 100 nm X 100 nm, such as colloidal particle of oxide or hydroxide of aluminum, may also be used. *See Kita, e.g., col. 6, lines 17-24.* The particle size referenced in the Office Action of 400 nm refers to a pearl necklace-like colloidal particle formed when individual spherical particles of 10 to 50 nm lie in a row at a length of 50 to 400 nm. *See Kita, col. 6, lines 19-24.*

The particles taught by Kita to be useful are necessarily small, and do not individually reach the size of the spacers required by the claimed invention. This is because the particles in the claimed invention provide a function that is completely different than provided by the Kita particles. The particles of the claimed invention, being larger than that taught by Kita, are so sized to provide a spacing function. The claimed spacer particles assist in reducing damage to the surface of the thermal sensitive coating—a sufficient amount of these spacer particles extend beyond the "surface" of the coating to prevent damage to the surface, e.g., by rubbing with an interleave or with the backside of another printing plate. In other words, at least part of the spacer particles protrude from the surface of the coating in order to "space" the coating from the interleave or from the back of another printing plate. *See, e.g., pending application, page 7.*

Kita, in contrast, teaches that surface damage is to be prevented not by any particle, but by use of a water-soluble overcoat. In order to "protect the water-receptive layer from staining or scratching during storage or handling of the printing plate, the plate precursor can have a water-soluble overcoat." *See Kita, col. 8, lines 61-66.*

That the Kita particles do not function in the manner of the present invention is also supported by Kita's description of the preferred thickness of the water-receptive layer—from 0.1 to 3 μm and most preferably from 0.5 to 2 μm. This, according to Kita, ensures durability and good press life. *See Kita. col. 8, lines 47-52.* One skilled in the art would understand that relatively smaller Kita particles are to be used with relatively thinner water-receptive

layers, and relatively larger Kita particles are to be used with relatively thicker water-receptive layers. The same can be said for Loccufier (colloidal organic pigments, alleged to be the same as the Kita particles, ranging from 0.005μm to 10μm, while the layer ranges in thickness from 0.2μm to 25μm, *see col. 11, lines 25-31*), and Ide (*see Fig. 1*, wherein the size of the particles is less than the thickness of the layer).

Given these teachings in the cited prior art, none of the particle sizes of Kita, Loccufier or Ide would be sufficient to protrude beyond the surface of the layer, and therefore there is no teaching provided by Kita (or in any other cited reference) to include particles of relatively great size, such as those disclosed in Loccufier and Ide, as suggested in the Office Action. Indeed, and as mentioned above, Kita, Loccufier and Ide teach the opposite—the particle size must not exceed the thickness of the layer.

Further, the teaching present in Kita fails to provide any correlation of an increase in particle size with improved performance. Indeed, when Kita discusses the improvements in adhesion and compression capacity, it does so in connection with the amount of fine powder added to the ink-receptive layer—not the size of the fine powder particles. *See Kita, col. 3, lines 29-37.* There is simply no basis in Kita itself for substituting particles having a size as claimed into the ink-receptive layer; particularly to provide any durability because the Kita layer is covered with a protective overcoat.

For all of the foregoing reasons, Applicants submit that the asserted combination is improper, and that the rejection should be withdrawn.

Conclusion

Applicants believe the application is in proper condition for allowance, the examiner is respectfully requested to pass the application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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